

## ABSTRACT OF THE DISCLOSURE

The invention provides an isolated nucleic acid characteristic of human amyloid precursor protein 770 including the  
5 nucleotides encoding codon 670 and 671, wherein the nucleic acid encodes an amino acid other than lysine at codon 670 and/or an amino acid other than methionine at codon 671. Also provided is a method of diagnosing or predicting a predisposition to Alzheimer's disease, comprising detecting in a sample from a subject the presence of a  
10 mutation at a nucleotide position corresponding to codons 670 and/or 671 of amyloid precursor protein or fragment thereof, the presence of the mutation indicating the presence of or a predisposition to Alzheimer's disease.

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